

Patent Claims

1. Lustrous copper-based metal flakes that contain, in addition to copper, at least one additional metallic alloy component and are produced via vacuum deposition of metal films onto a carrier sheet, stripping of the films from the carrier sheet, and subsequent comminuting of the films.
2. Lustrous copper-based metal flakes according to claim 1, **characterized in that** the flakes contain at least 51% copper and between 1 and 49% aluminum.
3. Lustrous copper-based metal flakes according to claim 1 or 2, **characterized in that** the flakes contain silicon as an additional alloy component.
4. Lustrous copper-based metal flakes according to any of claims 1 through 3, **characterized in that** the flake-shaped effect pigment has plane-parallel surfaces and a thickness between 10 and 100 nm, preferably between 20 and 60 nm.
5. Lustrous, copper-based metal flakes according to any of claims 1 through 4, **characterized in that** the surface of the pigment particles is coated with an anti-corrosive layer.
6. Lustrous copper-based metal flakes according to claim 5, **characterized in that** the anticorrosive layer contains aluminum oxide, silicon oxide, phosphate, phosphoric acid, phosphoric ester, phosphinic acid, silanes, organically modified

silicates, titanates, zirconates or methacrylate-based polymer layers or combinations of these compounds.

7. A method for producing lustrous, copper-based metal flakes according to any
5 of claims 1 through 6 with the following process steps:

- a) optionally applying a release coat on a carrier sheet
- b) applying of a metal film onto the release coat or the carrier sheet
- c) stripping of the metal film
- d) comminuting to pigment particles.

10

8. A method according to claim 7, **characterized in that** applying of the metal film takes place through evaporation of the alloy components.

9. A method according to claim 7, **characterized in that** applying of the metal
15 film takes place through separate evaporation of the alloy components.

10. A method according to claim 7, **characterized in that** applying of the metal film takes place through separate evaporation of an alloy and one or more additional components.

20

11. A method according to any of claims 7 through 10, **characterized in that** applying of the metal film takes place through electron beam, resistance heating, or radiation heating.

12. A method according to any of claims 7 through 11, **characterized in that** applying of the metal film takes places through flash evaporation, simultaneous evaporation, or jumping beam evaporation.